PROVINCIAL SURVEY OF MUNICIPAL SOLID WASTE COMPOSTING AND OZONE DEPLETING SUBSTANCE MANAGEMENT TRENDS

Manitoba Conservation Report 2002-07

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Protecting & Managing our Future

Manitoba Conservation

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EXECUTIVE SUMMARY

On June 25, 2001, Manitoba Conservation issued the *Manitoba Composting and White Goods Recycling Survey* to Manitoba's 202 municipalities. The purpose of the survey was to gather information about trends in waste diversion throughout Manitoba focusing on five key areas, including: recycling, composting, ozone depleting substances (ODS) management, white goods recycling, and resource requirements in these areas. There was a specific emphasis on obtaining information on local composting and ODS management programs.

Of the 202 surveys distributed, 123 municipalities responded – a 61% response rate. The responding municipalities represent a population of 948,799, 85% of the total Manitoba population; or 318,799 excluding Winnipeg, 66% of Manitoba's population. Highlights of the survey results, include:

1. Recycling: 72% of the respondents have established a municipal-run recycling program, and 7% are considering or developing one. Municipalities with established programs represent 93% of the total population represented, or 74% of the population excluding the City of Winnipeg. The most common program component was the recycling depot, operated by 83% of the recycling municipalities.

2a. Composting: 32% of the respondents have established a municipal-run composting program, and 20% are considering or developing one. Municipalities with established programs represent 80% of the total population represented, or 40% of the population excluding the City of Winnipeg. The most common composting method utilized was the mulching pile method. The most frequently composted material was leaves, and the most common end use of composted material was for free public use.

2b. Backyard Composting: 15% of respondents have established a backyard composting promotional program, and 9% are considering or developing one. Municipalities with established programs represent 74% of the total population represented, or 23% of the population excluding the City of Winnipeg. The most commonly utilized promotional method was the offering of free publications.

3. ODS Management: 59% of responding municipalities have implemented an ODS management program, with 89% of the total population represented, or 67% excluding the City of Winnipeg. The most frequently used management tool was ODS recovery from white goods prior to disposal at the landfill by the disposing individual. The most common final destination identified for ODS was to a contractor.

4. White Goods Recycling: The most common destination for white goods was to be crushed with other scrap metals, for 35% of responding municipalities, and the scrap metal is most commonly recycled on an annual basis.

5. Resource Requirements: The most commonly indicated resource need was promotional and educational material, for 49% of all respondents.

PROVINCIAL SURVEY OF MUNICIPAL SOLID WASTE COMPOSTING AND OZONE DEPLETING SUBSTANCES MANAGEMENT TRENDS

BACKGROUND

During the summer of 2001, Manitoba Conservation developed and issued to Manitoba municipalities the *Manitoba Composting and White Goods Recycling Survey*. Information gathered through the survey is needed to help identify trends and activities, and to help Manitoba Conservation evaluate and design potential program options for improving waste management practices.

Interest in organic waste and ozone depleting substances (ODS) management is increasing throughout Manitoba. It is estimated that organic waste makes up over 30% of municipal solid waste, and practically all of it can potentially be diverted from Manitoba's waste disposal grounds. Therefore, the development and enhancement of municipal composting programs would significantly reduce the amount of solid waste entering waste disposal grounds. Composting programs also help to address the issue of climate change brought on by greenhouse gas emissions. Waste disposal grounds are a major source of methane, a potent greenhouse gas. It is estimated that between 40 and 100 kilograms of methane are produced from each tonne of waste disposed at a waste disposal ground. With roughly 950,000 tonnes of solid waste disposed each year in Manitoba, the need for effective waste diversion programs is clear. Composting of organic waste provides us with a nearly methane-free solution.

Another important aspect of the climate change issue is the depletion of the stratospheric ozone layer. To help address this issue, regulatory amendments are being proposed to the Manitoba Regulation 103/94 – Manitoba Ozone Depleting Substances Regulation to place additional use and control measures on ozone depleting substances. A major constituent of these substances is made up of chlorofluorocarbons (CFCs), which are commonly found as cooling agents in white goods, such as refrigerators, freezers, and air conditioners. As CFCs are being phased out world-wide, they are being replaced with alternatives such as hydrofluorocarbons (HFCs). While HFCs are not damaging to the ozone layer, they do behave as a greenhouse gas, contributing to climate change (global warming) when released into the atmosphere. In Manitoba, there is currently no regulation of HFCs, but there is a *National Action Plan* (NAP) in place to amend the ozone layer protection program to include the regulation of HFCs and other halocarbon alternatives. The development of standard guidelines for a strong ODS and halocarbon alternatives management program will contribute greatly to the protection of our ozone layer and the mitigation of global warming.

PURPOSE OF THIS SURVEY

The purpose of this survey is to gather information that is representative of the trends and current activities in Manitoba, related to composting, ODS management and white goods recycling. With this information, Manitoba Conservation will be better able to evaluate and design potential program options for improving waste and ODS management, and subsequently contribute to solving the issues surrounding climate change. By understanding the barriers to the widespread adoption of these practices, as well as the trends in current practices throughout Manitoba, a unified course of action can be developed.

SURVEY RESULTS

Of the 202 surveys distributed on June 25, 2001, 61% (123) had been returned at the time of this report. These 123 municipalities represent a population of 948,799, 85% of the total Manitoba population[1]. Excluding Winnipeg, 66% of Manitoba's rural population is represented. A list of the responding municipalities and their populations is provided in *Table 1*. The survey has been divided into five sections: (1) recycling program components, (2a) municipal composting program components, (2b) backyard composting promotion components, (3) ODS management program components and (4) white goods recycling methods, and (5) resource needs.

Table 1. *Respondent Municipalities and Populations.*

MUNICIPALITY	POPULATION	MUNICIPALITY	POPULATION
City of Brandon	39,175	RM of Ethelbert	514
City of Dauphin	8,600	RM of Fisher	2,154
City of Selkirk	9,981	RM of Franklin	1,700
City of Steinbach	8,478	RM of Gilbert Plains	976
City of Thompson	14,385	RM of Gimli	3,124
City of Winnipeg	630,000	RM of Glenwood	3,001
LGD of Pinawa	1,672	RM of Grandview	904
RM of Albert	475	RM of Grey	2,201
RM of Alexander	2,555	RM of Hanover	9,833
RM of Alonsa	1,769	RM of Harrison	894
RM of Argyle	1,220	RM of Headingley	1,587
RM of Armstrong	1,866	RM of Hillsburg	559
RM of Arthur	528	RM of Kelsey	2,746
RM of Bifrost	2,851	RM of Lac du Bonnet	2,280
RM of Birtle	862	RM of Louise	1,090
RM of Blanshard	655	RM of MacDonald	4,900
RM of Brokenhead	3,495	RM of Minitonas	1,193
RM of Cameron	527	RM of Morris	2,850
RM of Cartier	3,009	RM of Mossey River	752
RM of Coldwell	1,399	RM of North Norfolk	3,024
RM of Cornwallis	4,279	RM of Oakland	1,086
RM of East St. Paul	6,437	RM of Ochre River	980
RM of Ellice	526	RM of Pembina	1,850
RM of Elton	1,425	RM of Piney	1,604
RM of Eriksdale	942	RM of Portage La Prairie	6,627

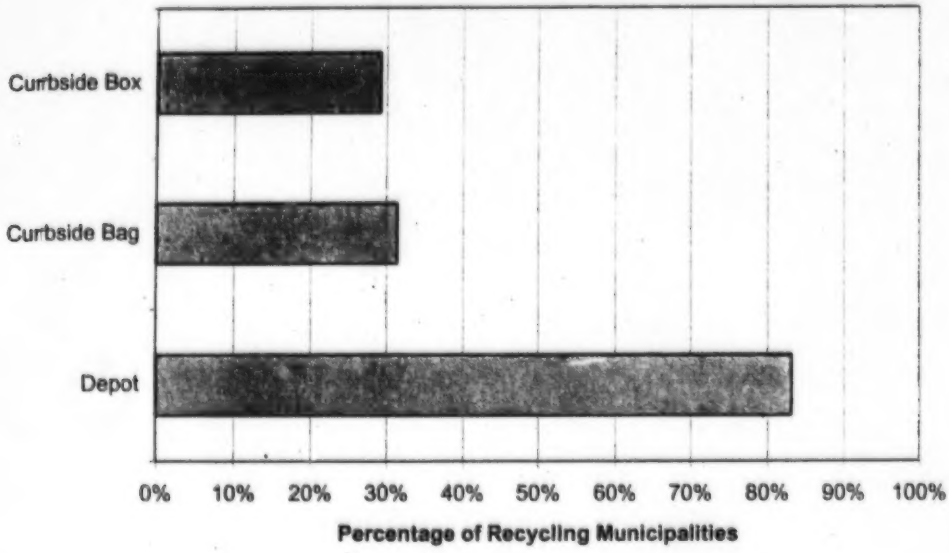
[1] Based on 1996 census figures.

MUNICIPALITY	POPULATION
RM of Reynolds	1,314
RM of Rhineland	4,204
RM of Riverside	870
RM of Rockwood	7,500
RM of Roland	984
RM of Rosedale	1,641
RM of Rosser	1,369
RM of Russell	553
RM of Saskatchewan	661
RM of Shoal Lake	621
RM of South Cypress	862
RM of Springfield	13,550
RM of St. Clements	8,516
RM of St. Francois Xavier	992
RM of Stanley	4,616
RM of Ste. Anne	4,213
RM of Ste. Rose	944
RM of Strathclair	1,026
RM of Strathcona	778
RM of Stuartburn	1,563
RM of Swan River	2,907
RM of Thompson	1,321
RM of Turtle Mountain	3,387
RM of Victoria	1,275
RM of Victoria Beach	227
RM of Wallace	1,654
RM of West St. Paul	3,720
RM of Westbourne	2,035
RM of Whitemouth	1,700
RM of Whitewater	766
RM of Winchester	625
RM of Woodlands	3,457
RM of Woodworth	1,047
Town of Altona	3,500
Town of Arborg	1,012
Town of Beausejour	2,712
Town of Carman	2,704
Town of Churchill	1,100
Town of Deloraine	1,041
Town of Emerson	737
Town of Gilbert Plains	748
Town of Gillam	1,534
Town of Gimli	1,574
Town of Gladstone	927
Town of Grandview	856
Town of Hartney	462
Town of Lac du Bonnet	1,070
Town of Manitou	781
Town of Minitonas	598
Town of Minnedosa	2,500
Town of Morden	5,689
Town of Niverville	1,734
Town of Pilot Mound	716
Town of Plum Coulee	729
Town of Rapid City	408
Town of Roblin	1,896
Town of Russell	1,605
Town of Shoal Lake	801
Town of Ste. Anne	1,511
Town of Stonewall	3,700
Town of Swan River	3,986
Town of Virden	3,150
Town of Winkler	7,241
Village of Benito	460
Village of Binscarth	463
Village of Crystal City	433
Village of Elkhorn	514
Village of MacGregor	898
Village of McCreary	537
Village of Powerview	789
Village of Somerset	471
Village of St. Lazare	289
Village of Wawanesa	485
TOTAL POPULATION	**948,799**

SECTION 1 – RECYCLING:

In the recycling area, 72% (89) of the municipalities responding to the survey have established a municipal-run recycling program. This represents 93% of the total population represented by the responding municipalities, or 74% of Manitoba's population base, excluding the City of Winnipeg. In addition, 7% (9) of municipalities responding to the survey are considering or developing a recycling program. 83% (74) of municipalities that have established a recycling program operate a recycling depot; 31% (28) of municipalities that have established a recycling program have implemented a curbside bag collection system; and 29% (26) of municipalities that have established a recycling program have implemented a curbside box (blue box) collection system. *Figure 1* outlines the frequency of recycling components among municipalities that have established a municipal-run recycling program.

Figure 1. *Employed recycling program components as a percentage of recycling municipalities.*



SECTION 2a – MUNICIPAL COMPOSTING:

In the municipal composting area, 32% (39) of the municipalities responding to the survey have established a municipal-run composting program. This represents 80% of the total population represented by those municipalities, or 40% of Manitoba's population, excluding the City of Winnipeg. In addition, 16% (20) of the municipalities responding to the survey are considering or developing a municipal composting program.

The most common composting method employed by the responding municipalities that have established a municipal composting program is the mulching pile method (piles with little or no turning) at 57%. The proportion of all methods is outlined in *Figure 2*. The most commonly composted material is leaves, which are composted by 92% (36) of the responding municipalities that have established a municipal composting program. *Figure 3* and *Figure 4* display the frequencies and relative proportion of composted materials. The most commonly used equipment is the front-end loader, used by 87% (34) of the responding municipalities that have established a municipal composting program. The relative proportion of all equipment used is outlined in *Figure 5*. The most common end-use of composted material was free give-away to the public, practised by 67% (27) of the responding municipalities that have established a municipal composting program. The survey indicated that 13% (5) of the responding municipalities that have established a municipal composting program used the material for municipal projects, and the remaining 20% did not specify, or were undecided about the end use of the compost material. Additionally, 15% (6) of the responding municipalities that have

established a municipal composting program employ a compost promotion and/or education program.

Figure 2. *Relative proportion of composting methods utilized by composting municipalities.*

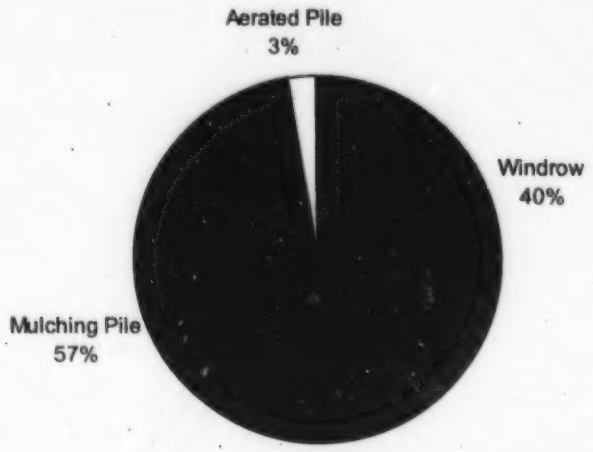


Figure 3. *Frequency of composted material as a percentage of composting municipalities.*

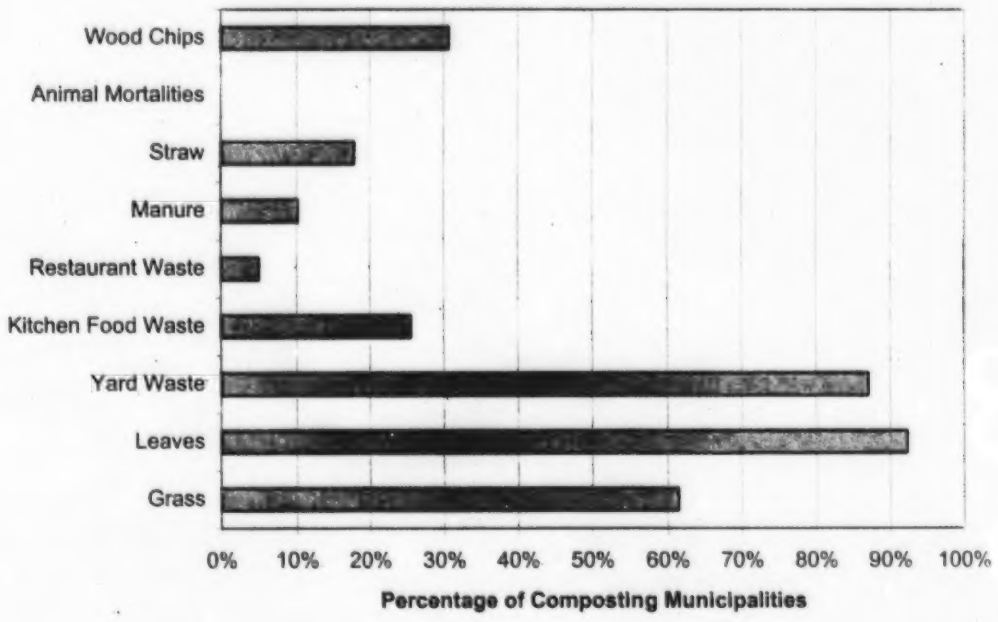


Figure 4. *Relative Proportion of Total Composted Materials.*

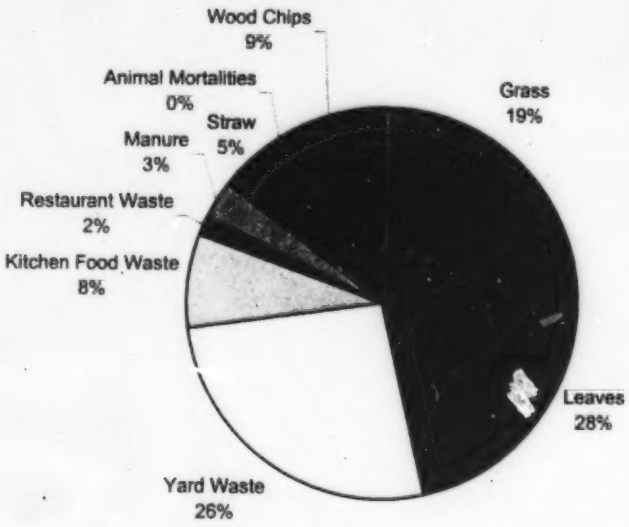
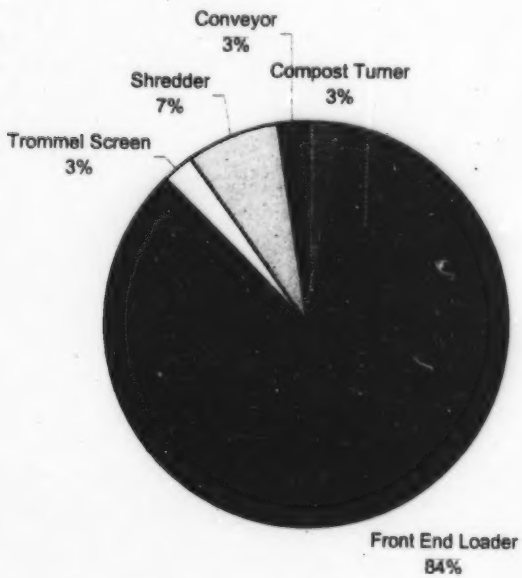


Figure 5. *Relative proportion of composting equipment used.*

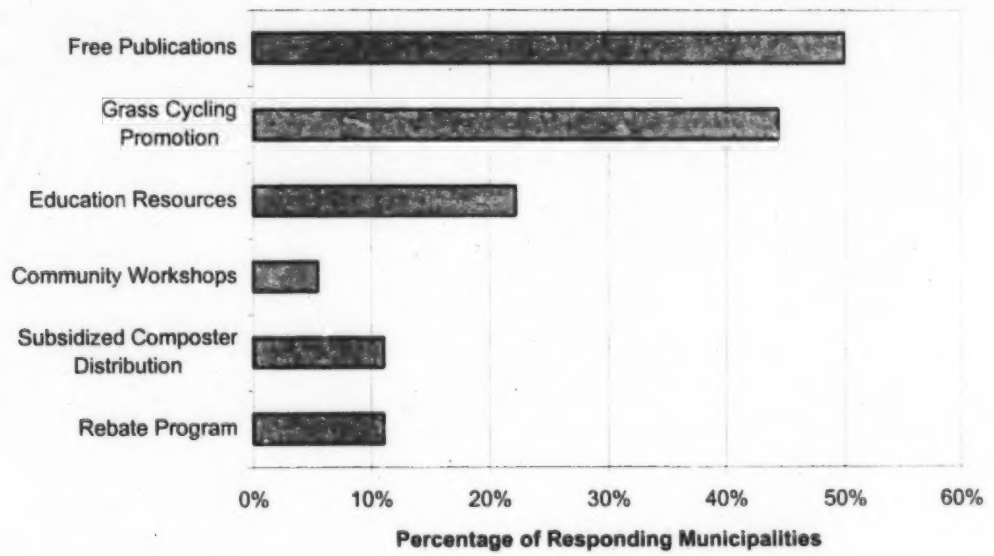


SECTION 2b – BACKYARD COMPOSTING:

In the backyard composting area, 15% (18) of the municipalities responding to the survey have established a municipal-run backyard composting promotion program. This represents 74% of the total population represented by those municipalities, or 23% of Manitoba's population, excluding the City of Winnipeg. In addition, 9% (11) of the municipalities responding to the survey are considering or developing a backyard composting promotion program.

The most commonly utilized promotion method for backyard composting among responding municipalities that have established a backyard composting promotion program is the offering of free publications (50%). *Figure 6* outlines the frequency of promotional methods utilized by responding municipalities that have established a municipal composting program.

Figure 6. *Frequency of backyard composting promotion components as a percentage of promoting municipalities.*



SECTION 3 – ODS MANAGEMENT:

In the ODS Management area, 59% (73) of the municipalities responding to the survey have established a municipal-run ODS management program. This represents 89% of the total population represented by those municipalities, or 67% of Manitoba's population, excluding the City of Winnipeg.

The most commonly employed ODS management tool is the recovery of ODS prior to disposal of the white goods containing ODS, which is generally the responsibility of the individual disposing the appliance. This method is used by 68% of the responding municipalities that have

established an ODS management program. The frequency of various program components among municipalities that have established an ODS management program is outlined in *Figure 7*. The most common destination for ODS is to a contractor, from 85% of municipalities that have established an ODS management program. *Figure 8* outlines the relative proportion of final ODS destinations.

Figure 7. *Fequency of ODS management components as a percentage of ODS managing municipalities.*

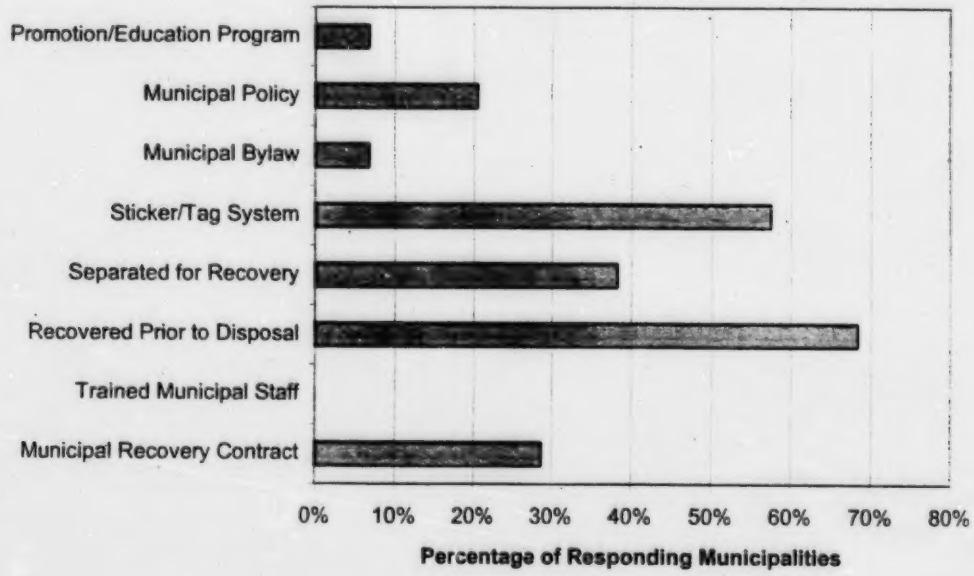
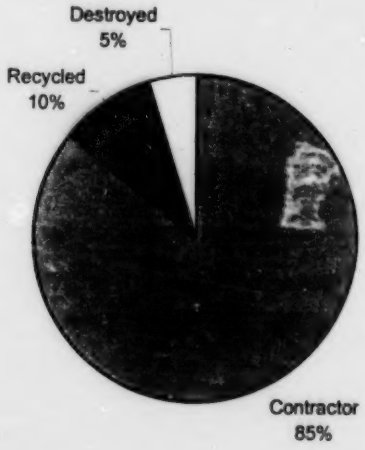


Figure 8. *Relative proportion of final ODS destinations.*



SECTION 4 – WHITE GOODS RECYCLING

In the White Goods Recycling area, most (35%) of the municipalities responding to the survey identified that the final destination for white goods is to be crushed with other metals. The relative frequency of white goods destinations is outlined in *Figure 9*. Additionally, 40% of municipalities responding to the survey identified that the most common recycling schedule for white goods along with other scrap material is on an annual basis (once per year). In the "other" category the most common recycling schedule is "as needed" (33%). The relative frequency of scrap materials recycling schedules is outlined in *Figure 10*.

Figure 9. *Relative proportion of white goods destinations among survey respondents.*

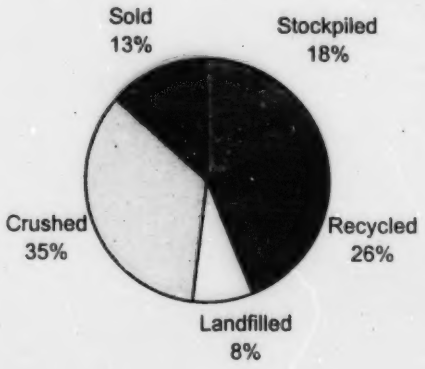
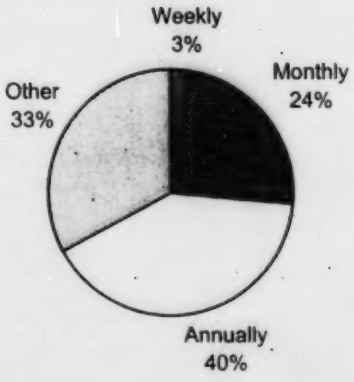


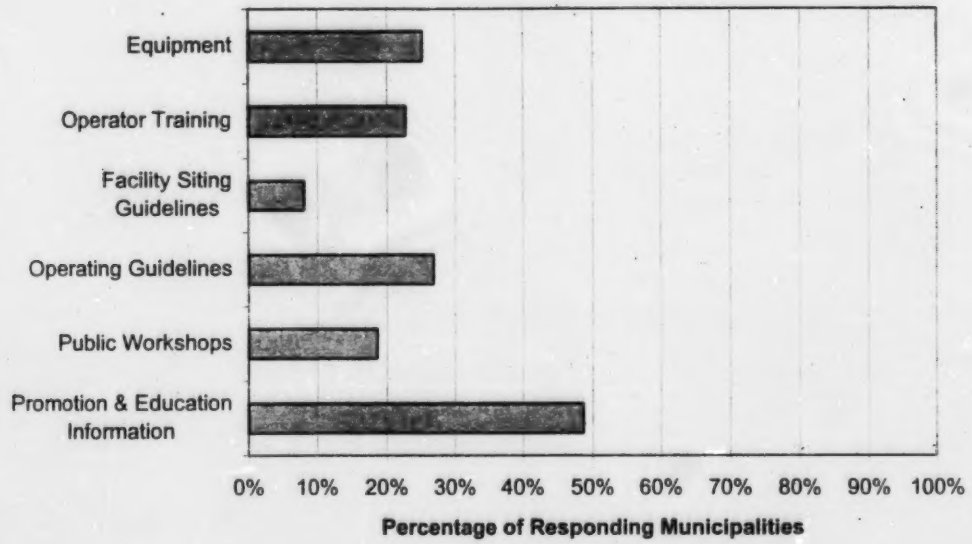
Figure 10. *Relative proportion of scrap metal recycling schedules among respondents.*



SECTION 5. – RESOURCE NEEDS:

The most common resource need for the areas covered by this survey is promotion and education information, identified by 49% (60) of the municipalities responding to the survey. This is followed by operating guidelines (27%); equipment (25%); operator training (23%); public workshops (19%); and facility siting guidelines (8%) identified by municipalities as priority resource needs. The frequencies of resource needs for respondents are outlined in *Figure 11*.

Figure 11. *Frequencies of specific resource needs among respondents.*



CONCLUSION

Assuming that the 123 municipalities that responded to the survey are representative of Manitoba's 202 municipalities, the data that have been gathered in this survey suggests the following trends in the five areas covered in this survey:

- About 93% of Manitoba's population have access to a municipal-run recycling program, or 74% of Manitoba's population outside of Winnipeg, with an additional 7% of municipalities considering or developing a recycling program. The most common collection system for recyclable materials is a recycling depot used by over 80% of municipalities with a recycling program. An estimated 60% of municipalities offer a recycling program with a curbside collection service.

- Outside the City of Winnipeg, the data suggest that about 40% of Manitoba's population have access to a municipal-run composting program (80% with Winnipeg included) with about 16% of municipalities considering or developing a program. The most common composting method is the mulching pile, and the most commonly composted material is leaves. The front-end loader is the most commonly used equipment for turning material. An estimated 15% of Manitoba's municipalities promote backyard composting representing about 23% of Manitoba's population. The most common promotional method is to make free publications available.
- Almost 90% of all Manitobans are served by an ODS management program, and about 67% of Manitoba's population outside the City of Winnipeg. The most commonly employed management tool is for individuals disposing of the ODS containing white good to be responsible for contracting for the recovery of the ODS prior to disposal of the white goods.
- The most common destination for white goods is to be crushed with other scrap metals for 35% of Manitoba's municipalities. The most common recycling schedule for white goods is on an annual basis in 40% of municipalities.
- The most common resource need identified by Manitoba's municipalities is promotional and educational information, followed by operating guidelines, equipment, operator training, public workshops, and facility siting guidelines. These results reflect a need for improved education, training and the need for guidelines to implement municipal programs in the above areas.

Over the past decade, there has been growth in the areas outlined in this survey. However, barriers indicated by many of the respondents have made clear some of the issues that will have to be addressed as we work to improve waste management in Manitoba. Some of the major issues that were identified are as follows:

- Program costs and resource availability.
- Space – Difficulty in siting space-demanding facilities, such as for municipal composting.
  – Difficulty in implementing programs in large, sparsely populated municipalities.
- Aesthetics & Odour – Complaints due to appearance and/or odour of backyard and central composting systems, usually due to improper composting.
- Responsibility – Who is responsible for the expense of recovering ODS from white goods? Placing responsibility on individuals disposing white goods may result in illegal dumping or release of ODS.

APPENDIX A

COVER LETTER AND SURVEY

Manitoba

Conservation Pollution Prevention

123 Main Street, Suite 160
Winnipeg MB R3C 1A5
Canada

Telephone: (204) 945-8443
Facsimile: (204) 945-1211

June 25, 2001

Dear Sir/Madame:

Enclosed is a copy of the "*Manitoba Composting and White Goods Recycling Survey*". This survey focuses on the current composting practices in Manitoba's municipalities, the status of white goods recycling, and the recovery of ozone depleting substances from domestic appliances. Please fill out this survey, even if your municipality does not currently have any of these programs or facilities.

Your participation in this survey is important, as it will help to inform Manitoba Conservation of the current status of these selected waste management activities in the Province of Manitoba. With this information, Manitoba Conservation will be better able to evaluate and design potential program options for improving waste management practices.

Please return the completed survey by **Wednesday, July 18, 2001**. If you have any questions pertaining to the survey, you may contact me at (204) 945-7054 or toll-free at 1-800-282-8069, ext. 7054.

Sincerely,

Brock Epp
P2 Programs Assistant

Enclosure

Manitoba Conservation

Pollution Prevention Branch

MANITOBA COMPOSTING AND WHITE GOODS RECYCLING SURVEY

Contact Name: _____

Title: _____

Municipality: _____

Phone: _____

E-mail: _____

SECTION I: GENERAL INFORMATION

1. Total Municipal Population: _____
2. Number of Households:

   Single Family _____ Multi-Family _____ Total _____

3. Would you like a copy of the results of the survey? ❑ **Yes** ❑ **No**

SECTION II: WASTE MANAGEMENT SYSTEM

1. Please complete the following table:

WDG* Class	# of WDGs	Annual Tonnage	Life Expectancy
Class 1			
Class 2			
Class 3			
Totals:			

* Waste Disposal Ground

2. Is there a disposal capacity problem in your municipality? ❑ **Yes** ❑ **No**

   If *yes*, explain:_____

   Are you considering establishing or enhancing a waste diversion program? ❑ **Yes** ❑ **No**

   If *yes*, what type: ❑ Residential Recycling ❑ Large scale composting

   ❑ Backyard composting ❑ Other:_____

3. How many WDGs have been closed in the municipality in the last 5 years? _____

4. How many WDGs are scheduled for closure in the next 2 years? _____

5. Do you plan on developing a new WDG in the next 2 years? ❑ **Yes** ❑ **No**

6. Do you plan on constructing a waste transfer station in the next 2 years? ❑ **Yes** ❑ **No**
   If more than one, how many? _____

7. Do you operate a multi-material recycling program?
   Depot: ❑ **Yes** ❑ **No** Curbside: Bag ❑ **Yes** ❑ **No**
   Box ❑ **Yes** ❑ **No**

8. Do you participate in a regional waste management system (with 3 or more partners)?
   ❑ **Yes** ❑ **No**
   If *yes*, who operates the waste management facility? _____
   Do you plan to participate in a regional waste management system (with 3 or more partners) within the next 2 years? ❑ **Yes** ❑ **No**

9. Do you have a weigh scale at the WDG or waste transfer station? ❑ **Yes** ❑ **No**

10. Do you charge a tipping fee at the WDG or waste transfer station? ❑ **Yes** ❑ **No**
    If *yes*, how much? $_____

SECTION III: MUNICIPAL COMPOSTING INFORMATION

1. Does the municipality operate one or more composting sites? ❑ **Yes** ❑ **No**
   If more than one, how many? _____
   If *no*, proceed to **Question 10**.

2. Indicate the composting method(s) used:
   - ❑ In-vessel
   - ❑ Mulching pile (piles with little or no turning)
   - ❑ Windrow (periodic turning)
   - ❑ Aerated pile or windrow (forced air system)
   - ❑ Other, please identify:

   _____

3. Indicate the organic waste collection methods used:
   - ❑ Curbside
   - ❑ Drop-off at facility
   - ❑ Other, please identify:

   _____

4. Is the composting facility located at the waste disposal ground? ❑ **Yes** ❑ **No**

5. Do you charge a tipping fee for organic waste? ❑ **Yes** ❑ **No**
   If *yes*, how much? $_____

6. Identify the composting equipment used:
   - ❑ Compost turner
   - ❑ Front-end loader
   - ❑ Trommel screen
   - ❑ Shredder
   - ❑ Conveyor
   - ❑ Other, please identify:

     _____

7. Identify the composition of your compost?
   - ❑ Grass
   - ❑ Leaves only
   - ❑ Leaves and yard waste only
   - ❑ Leaves, yard and kitchen food waste
   - ❑ Restaurant waste
   - ❑ Manure
   - ❑ Straw
   - ❑ Animal mortalities
   - ❑ Wood chips (shrubs/tree trimmings)
   - ❑ Other, please identify: _____

8. Please indicate the amount of material that you compost annually: _____ tonnes/year

9. What is the end use of the composted material?
   - ❑ Free give-away
   - ❑ Sold: a) To whom? _____
     b) How is it sold?_____
   - ❑ Other, please identify:

     _____

10. Do you have a public compost promotion or education program? ❑ **Yes** ❑ **No**

    If *yes*, please describe. ***Please feel free to submit copies of your promotion and education materials.***

    _____

    _____

11. Is your municipality planning to develop a composting site within 2 years? ❑ **Yes** ❑ **No**

12. Are there any commercial composting operations within your municipality? ❑ **Yes** ❑ **No**

If *yes*, please identify:

_____

_____

_____

13. Identify any barriers to implementing a municipal composting operation/program?

_____

_____

_____

SECTION IV: RESIDENTIAL COMPOSTING

1. Does your municipality promote backyard composting? ❑ **Yes** ❑ **No**

If *no*, proceed to **Question 4**.

2. Please indicate the components of your program. *Check all that apply*:

❑ Municipal rebate program

❑ Subsidized distribution of composters

❑ Offer community workshops

❑ Offer education resources

❑ Promote grass cycling

❑ Offer free publications

❑ Other: _____

3. Total number of backyard composters distributed in 2000: _____

4. Is your municipality considering a backyard-composting program? ❑ **Yes** ❑ **No**

If *no*, identify the barriers to implementing a backyard-composting program.

_____

_____

_____

SECTION V: WHITE GOODS RECYCLING

In this section of the survey, White Goods are defined as residential/domestic appliances, including: refrigerators, freezers, air conditioners, de-humidifiers, and heat pumps containing an ozone depleting substance (ODS) such as freon and/or other refrigerants.

1. Does your municipality have a management program for White Goods/domestic appliances containing an ODS? ❑ **Yes** ❑ **No**

   If *yes*, identify all municipal program components that apply:

   - ❑ A fee is charged at the WDG/transfer station for disposal of White Goods containing an ODS. If *yes*, how much? $_____
   - ❑ The municipality offers a residential pick-up service for White Goods containing an ODS. If *yes*, how much? $_____
   - ❑ The municipality has a service contract for the recovery of ODS from White Goods at the WDG/transfer station.
   - ❑ Municipal staff are trained and certified to recover ODS from White Goods.
   - ❑ ODS must be recovered from White Goods prior to disposal at the WDG/transfer station.
   - ❑ White Goods are separated at the WDG/transfer station to allow for the recovery ODS from the unit.
   - ❑ A sticker or tag system is used to indicate that the ODS has been removed.
   - ❑ A municipal bylaw is in place for the recovery and management of ODS.
   - ❑ A municipal policy is in place for the recovery and management of ODS.
   - ❑ A municipal promotion/education program is in place.
   - ❑ Other: _____

2. Estimated number of units received annually requiring ODS recovery: _____
3. Estimated number of units received annually with ODS recovered: _____
4. Estimated total weight (kgs) of ODS recovered annually: _____
5. How often is ODS recovered from White Goods?

   ❑ weekly ❑ monthly ❑ annually ❑ other: _____

6. Identify the destination of the ODS once recovered from the unit *(identify all that apply):*

❑ contractor ❑ recycled ❑ stockpiled/banked

❑ sent for destruction ❑ sold ❑ dumped with rest of unit

❑ other: _____

7. Identify the destination of scrap White Goods *(identify all that apply):*

❑ separated and stockpiled ❑ recycled ❑ sent to WDG

❑ crushed with other metals ❑ sold ❑ other: _____

8. How often is scrap material recycled:

❑ weekly ❑ monthly ❑ annually ❑ other: _____

9. Identify any barriers to implementing a municipal ODS management program?

_____

SECTION VI: RESOURCE NEEDS

1. What additional resources are needed to enhance municipal waste management programs?

❑ Promotion and education information ❑ Facility siting guidelines

❑ Public workshops ❑ Operator training

❑ Operating guidelines ❑ Equipment

❑ Other: _____

2. General comments.

_____

_____

PLEASE RETURN THE COMPLETED SURVEY BY MAIL TO:

Manitoba Conservation, Pollution Prevention Branch
123 Main Street, Suite 160
Winnipeg, MB R3C 1A5

APPENDIX B

DETAILED SURVEY RESULTS

| Municipality | Pop | Survey # | Landfills | Landfills Closed | Landfills Opening | Class 1 | Class 2 | Class 3 | RWM | Transfer Station | Recycling Program | Depots | Curbside Bag | Curbside Box | Composting Program | In-vessel | Windrow | Mulching Plan | Aerated Plan | Curbside | Drop Off | Other | Compost Turner | Front End Loader | Trommel Screen | Shredder | Conveyor | Grass | Leaves | Yard Waste | Kitchen Food Waste | Restaurant Waste | Manure | Straw | Animal Mortalities | Wood Chips | Compost Promotion/Assistance | End Use | Backyard Composting | Rebate Program | Composter Distribution | Community Workshops | Education Resources | Grass Cycling Promotion | Free Publications | CDS Mgmt | Municipal Recovery Centre | Trained Staff | Recovered Prior | Separation | Sticker/Tag System | Municipal Bylaw | Municipal Policy | Promotion/Awareness Program | CDS Destination | White Goods Stockpiled | White Goods Recycled | White Goods Landfilled | White Goods Crushed | White Goods Sold | Recycled Weekly | Recycled Monthly | Recycled Annually | Other Schedule | Promotion/Education Info | Public Workshops | Operating Guidelines | Facility Siting Guidelines | Operator Training | Equipment | Mail Survey Report |
|---|---|---

| Municipality | Pop | Survey # | Landfills | Landfills Closed | Landfills Closing | Landfills Opening | Class 1 | Class 2 | Class 3 | RVM | Transfer Station | Recycling Program | Depot | Curbside Bag | Curbside Box | Composting Program | In-vessel | Windrow | Mulching Pile | Aerated Pile | Curbside | Drop Off | Other | Compost Turner | Front End Loader | Trommel Screen | Shredder | Conveyor | Grass | Leaves | Yard Waste | Kitchen Food Waste | Restaurant Waste | Manure | Straw | Animal Mortalities | Wood Chips | Organic Incineration | End User | Backyard Composting | Rebate Program | Composter Distribution | Community Workshops | Education Resources | Grass Cycling Promotion | Fact Publications | CDS Mgmt | Municipal Recovery Centre | Trained Staff | Recovered Prior | Separated | Sticker/Tag System | Municipal Bylaw | Municipal Policy | Promotion/Education Programs | CDS Destination | White Goods Stockpiled | White Goods Recycled | White Goods Landfilled | White Goods Crushed | White Goods Sold | Recycled Weekly | Recycled Monthly | Recycled Annually | Other Schedule | Promotion/Education Info | Public Workshops | Operating Guidelines | Facility Siting Guidelines | Operator Training | Equipment | New Survey Report |
|---|---|---